

Low Back Pain in Out-door Patient at the Department of Neurology at Gabriel Touré Teaching Hospital in Bamako: Longitudinal, Descriptive and Prospective Study about 120 Patients

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Summary

Objective: to report the epidemiological and clinical aspects, the therapeutic itinerary and impact of back pain on the quality of life of patients in the neurology department of CHU Gabriel Touré Mali.

Patients and methods: this is a longitudinal study, conducted over 1 year. All patients seen in the department of Neurology, Gabriel Touré teaching hospital of Bamako with low back pain.

Results: hospital frequency of low back pain was 9.94% with female predominance 58.3% vs. 41.7% for men, mean age 49.5 years, with a range from 20 to 79 years. The pattern of evolution of the disease was acute in 19.2% and chronic in 80.8%. In fact 45% of our patients come in first intention to a General Practitioners, the average duration of follow-up at the level of GP was 215 days. 56.8% of patients had stop working and the average duration was 12 days, the estimated annual financial cost was 223,551.79 Francs XOF e.g. 341.3 Euro. A significant impact of back pain on quality of life, leisure, anxiety and depression was noted in most of the patients using the DALLAS self questionnaire.

Conclusion: Low back pain remains a frequent reason for consultation in neurology. Typical low back pain is the most frequent form. Management is multidisciplinary.

Keywords: Low back pain; Pain; DALLAS; Quality of life; Mali

Introduction

Lumbago, a painful musculo-skeletal disorder and the more frequent than scapulargia and cervicgia became a major public health problem worldwide [1,2]. Most people experience lumbago at least once in their lives with a lifetime prevalence of 85% with 25% chronic lumbago and 11% handicap in daily activities. The prevalence of lumbago increase with age, affecting more female 57% and peaking within two age ranges 7.7% in 30 to 44 y.o and 12.3% in 55 to 64 y.o. Evolution towards chronic form of the disorder happens in less than 10%, but accounts for 85% of direct and indirect costs. The likelihood to be cured from acute lombalgia is 90% at 15 days mark, but the recurrence is as frequent as 40% after six months of evolution.

Health costs related to the disease are higher than the resources allotted to HIV/AIDS, cancer and cardio-vascular diseases [3]. Care for the disease and consensual guidelines exist in developed countries [2]. In contrast, despite the relatively observed high incidence in Africa in general and Mali in particular, lumbago remains underreported.

Our study aimed at investigating the epidemio-clinical aspects and the therapeutic itinerary of lumbago patients on one side and at analyzing the socio-economic impact of the disorder on the society.

Patients and Methods

We did a longitudinal, descriptive and prospective study from April 1st, 2011 to March 31st, 2012 at the teaching hospital Gabriel Touré in Bamako, Mali. We recruited subsequently all patients aged 18 years old y.o or higher seen for back pain with or without irradiation to the lower limbs during the study period after obtaining an informed consent. Pain lasting more six months was considered chronic.

Patients were initially examined by experienced neurologists for

diagnostic after which routine outpatient visits with detailed anamnesis and systematic general and neurological exam were scheduled every other week for two months. We used the Dallas self-administered questionnaire to evaluate the impact of pain on the quality of life of patients [4,5]. Pain intensity was evaluated at the simple visual scale EVS in French [6]. Each patient underwent lumbar X-ray antero-posterior and lateral views, blood cell count, sedimentation speed, and Protein C Reactive.

A treatment regimen with three simultaneous medications at increasingly progressive doses in the absence of contraindications as followed: Amitypylline 25 mg as initial dose with 5 mg increase per week up to 75 mg daily; Paracetamol 1 g up to 3 g daily, ketoprofene 300 up to 600 mg.

Fonctional kinesitherapy was started concomitantly with medication upon resolution of acute painful crisis. Patients learned to reinforce the strength of the abdominal and back muscles along with the re-introduction to antalgic massages. For treatment follow up, we used a scale to estimate the pain relief from patients [6]: worsening of pain, no, slight, moderate or significant to complete relief.

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Received March 23, 2016; **Accepted** May 18, 2016; **Published** May 20, 2016

Citation: Maiga Y, Mamadou Z, Sangare M, Sanou M, Diallo S, et al (2016) Low Back Pain in Out-door Patient at the Department of Neurology at Gabriel Touré Teaching Hospital in Bamako: Longitudinal, Descriptive and Prospective Study about 120 Patients. J Pain Relief 5: 247. doi:10.4172/2167-0846.1000247

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Data collection and analysis

A survey questionnaire has been used to collect data on socio-demographic parameters age, gender, medical history, clinical and paraclinical signs and patients' evolution under treatment. The text and tables were made in Microsoft Word 2007 and the graphics in Microsoft Excel. Data were compiled, typed and analyzed with SPSS 12.0. We used Pearson correlation chi square to compare the proportions for statistical significance.

Results

Characteristics of the study population

The hospital frequency of lumbago was 9.94% 12/120 with a sex ratio of 1.4 for female. The average age was 49.5 y.o with the extremes of 20 and 79 y.o (Table 1). About 73.3% of the patients were inactive. The back pain was acute or subacute in 19% and chronic in 88.8% of patients.

Therapeutic itinerary of patients

Whereas 30.84% of patients mentioned a neurological dysfunction as cause of their pain, 23.32% had no clue at all. Using the Dallas score, patients had a negative impact of the pain on average in 70.7% on their daily activities, 49.58% on work and hobbies, 47.68% on socialization due to anxiety and depression (Table 2).

Patients consulted a physician in 72.5% resulting in non steroid anti-inflammatory drug prescription in 45% while 18.3% were self-medicating and 25.8% were seeing traditional healers with or without drug treatment. Primary physicians were asked for care in 45% of the cases. The average duration for care was 215 days. Back pain resulted in sleep disturbances in 35%, work difficulties in 32% and sexual dysfunction in 20% of the patients.

Efficacy of care

We have observed after four weeks of drug treatment and functional kinesitherapy as per our treatment regimen that patients were relieved completely in 50%, significantly in 20%, moderately in 15% and slightly in 8%. Patients reported no relief in 5% and pain.

Age in year	Fréquence N	Percent %
20-29	23	19.2
30-39	11	9.2
40-49	24	20
50-59	34	28.3
60-69	21	17.5
70-79	7	5.8
Total	120	100

Table 1: Repartition of patients by age interval.

	Average score	Extremes	Ecart type
Daily activitie	70.70	[30; 108]	21.5
Work and hobbies	49.58	[15;105]	28.04
Anxiety and depression	47.68	[15; 95]	22.76
Social activity	43.65	[15; 90]	19.58

Table 2: Caractéristiques of patients using the score on the DALLAS self-administered questionnaire.

Direct and indirect costs

Patients stopped working for an average of 12 days due to the pain. Patients spent 10 495.97 FCFA e.g €16.02 as consultation fee, 50 463.33 FCFA e.g. €77.04 and 162 592.79 FCFA e.g. €248.23 in prescription drugs adding up to a total of 223 551.79 FCFA e.g. €341.29 per year to care for lumbago (Table 3).

Discussion

In this study, we aimed at determining the prevalence of lumbago, its impact of the quality of life, patients' itinerary for care and to evaluate its economic burden in Mali. The prevalence of lumbago of 9.94% was lower as compared to 36% 996/2,766 reported by Macfarlane et al. 2012 in the United Kingdom [7] chi-square=20.9, p<0.0001. The teaching hospital Gabriel Touré is one of the reference health centers with the highest expertise in Mali. Since most patients with back pain are seen and cared for mainly in primary care medicine as compared to specialized medicine [5], the lower prevalence of lumbago is understandable despite its presumably high incidence in the general population. For instance, 45% (54/120) of our patients consulted primary care physicians.

The sex ratio was 1.4 in favor of female comparable to 1.2 [8-10], but much lower as compared to the 4.8 reported by Female predominance was previously reported in almost all the studies. In the African contest the hardship due to housekeeping, the high rate of illiteracy among women and the resulting low awareness about the safety rules for patients with back pain explain our finding. Only 26, 7% (32/120) practice some sort of sports or physical exercise especially swimming despite their documented benefits in the prevention and treatment of lumbago [11].

As reported previously, we found that the back pain impacted the daily activities, work and hobbies on one side and resulted in anxiety and depression on the other side as demonstrated by the self-administered DALLAS questionnaire [5]. In fact, in our cohort, patients stopped working due to the back pain in 56% 67/120. This proportion was significantly different from 24% 21/88 in France [12] chi-square=55.67, p<0.0001 and 89.6% 1216/1357 to 96% 1303/1357 in Tunisia [13] with chi-square=19.96, p<0.0001 and chi-square=16.12, p<0.0001 respectively. The estimated annual cost of lumbago care of 223 551.79 FCFA e.g. €341.29 was too high in a country where no social security coverage exists. The average work day loss was 12 days, which is different from 8 days [14], 48.1 days [15] or 210 days [13].

Conclusion

Lumbago is relatively frequent in Neurology outpatient visits in Mali. In line with studies from Western countries, this work highlighted the socio-economic magnitude of this disorder. A multidisciplinary care team, with primary care physicians, rheumatologists, psychologists, occupational and physical therapists, pain specialists for chronic back

	Average cost	Extremes	Ecart type
Consultation	10,495.83	[1,000; 260,000]	25,284.97
Complementary exams	50,463.33	[14,000; 445,600]	44,957.64
Prescription	162,592.79	[46,000; 840,000]	181,271
Total	223,551.79	[61,000; 1,545,600]	251,513.61

Table 3: Estimation of the annual cost of lumbago care in FCFA.

pain, will allow improving patients' care, to lessen the risks of recurrence and to favor the socio-professional reintegration.

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